

BAHIA... TOWARDS MAKING A VILLAGE WHOLE



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 Located three miles Northeast from downtown Novato, Bahia is a unique community with a friendly walk around a once lagoon off the Petaluma River.

Like modern zoning-sterilized subdivisions that contribute to ecological imbalance, it was built without informal social places nor productive workplaces, outside the residences. You must drive everywhere.

Even with only 290 households, it now has the opportunity to grow into a more self-reliant vibrant community, while providing the senior housing called for. This proposal shows how.

The Plan
 This plan envisions three primary sustainable community components:
 1. A social/work place at Misty Court... The "VILLAGE STORE"
 2. A TRAM that integrates the community up and down, including the senior housing. Alongside, the new MISTY STEPS offer healthy access to Laguna Vista Drive.
 3. An educative, hands-on VILLAGE FARM on the Bahia site to provide fresh crops to the community.

ECONOMICS
How
 To build Community within a budget for conventional housing, we PLAN SMARTER and BUILD BETTER CHEAPER.

Innovative planning smarter
 Minimizes sitework and saves money.
 • Eliminates cost of building a street for cars.
 • COMPACT housing site of only 1-1/2 acres minimizes underground utilities, requiring only a service road.
 • One common garage eliminates costly individual garaging.
 • Stronger POLE CONSTRUCTION eliminates grading and foundations.
 • Adds 7.7 Acres of open space for hikers and wildlife, 60% of the Misty site, all of the Bahia site.

Innovative architecture saves
 Conventional on-site construction methods are wasteful and costly. This proposal innovates a new way to build QUALITY cheaper.
 • A 20' GRID of steel built-up columns, deeply augured in the ground, carries all building loads, is stronger, eliminates grading.
 • Shop-built 20' x 20' MODULES are simply bolted onto the steel columns.
 • Using a single building system, more innovative than a Lego set, totally flexible with a catalog of components for all buildings, house, store, garage, workshop or barn, greatly REDUCES COST. The columns accommodate downspouts, seasonal canopies and exterior lighting.
 • BEAUTY and quality is insured when building under optimum conditions, with the highest aesthetic design control.
 • Channel bulkheads that span the columns retain terraces as needed.

The Economic Key
 By saving on sitework and construction through innovative planning and building, THERE IS MONEY to build the sustainable features of community, on the given budget.

HOUSING
The Housing
 Energy-conserving, informal, and accessible, a CO-HOUSING model with sufficient critical mass:
 • 19 senior homes, (6 studios / 10-1 BR / 3-2BR) each with its own garden room, radiant floors, beautifully comfortable and easy off a garden lane to the covered tram giving easy access to all the common facilities.
 • 10 non-senior homes, housing an actively supportive corps, caregivers for seniors, caretakers of the commons.
 • The flexibility of the design allows future growth if desired by the neighborhood.
 • A wide garden lane at each level becomes the perfect front porch, with a few benches, a laundry tool shed, recycling.

Garage
CARSHARE with an appropriate vehicle-mix of vans, pickups, small hybrids, all well maintained, make life easy.
 The green-roof structure is built into and extends the open space.
 30 garages, 7 visitor spaces, are all easily accessed from Misty Court.
 The amphitheater pond directs runoff to a cistern, protecting the house below.

COMMUNITY
Village Store
 This is designed to become the informal GATHERING PLACE, the heart of the neighborhood, beside the dining room for the co-residents. Bright and airy, the village store is the local cafe / bar, the diner, the soda fountain, besides the corner grocery. Loosely informal, it has the ability to be what the villagers want it to be: always open, serving every generation — a place to stroll, to read the newspapers, run into a friend, pick up some bread, get a drink, play ping-pong, go for movie night, good food. Workshop space to make a living, art or craft. NO MORE HAVING TO DRIVE EVERYWHERE.

The Tram
 The Tram INTEGRATES THE COMMUNITY up and down, sea level to high vistas, people to people, street to street — access without cars. Rising 135' in a 600' run equals a 22% grade. At 8 mph (700 fpm), the tram takes 1 minute, with a 1 minute stop at the top and bottom, 1/2 minute stop at each of 3 resident lanes, results in a 7 minute headway. Fully automatic and silent, the tram provides the alternative to the MISTY STEPS.

The Village Farm
 The breathtaking view over the Bahia crest is preserved and enhanced with a beautiful farm instead of more houses.
 The Bahia site has space to farm, but no topsoil. Fortunately NATURE compensates. The silted lagoon may well be the SOURCE of nutrients for building fertile soil. With full southern exposure and gravity irrigation, terraced crops would flourish here in a few years of permaculture practice. Observing or engaging, learning where food comes from is fascinating.

SUSTAINABILITY
"Green" Features
 • COMMUNITY made more self-reliant, walkable to goods and services at the VILLAGE STORE, and carshare. BUILDING COMMUNITY IS THE GREENEST path of all to sustainability.
WATER CONSERVATION
 • Roof rain water to cisterns
 • Groundwater to ponds, (that also protect homes below from runoff).
 • Grey water to irrigation.
FOOD production on terraced farm
 • Soil building using lagoon silt
 • Gravity irrigation along South-facing contours for crops
 • Fruit and nut tree groves
 • Farmyard animals for food and fertilizer
 • Greenhouse to extend productive season
Permaculture methods
SUNLIGHT
 • Integral photovoltaic solar roofs for power, on-demand hot water for supply and hydronic radiant floors.
SOCIAL
 • Create a Village Center to integrate entire community — uplanders with lowlanders, both with new co-housing population. Site this new gathering place at the most convenient location possible, closest to the main street Topaz.
ECONOMY / EDUCATION
 • Build a micro-economy for greater community self-sufficiency and well-being.
 • Create a PLACE of learning and discovery.
CONSTRUCTION
 • Facilitate solar orientation for warmth and light
 • Structure from recycled steel
 • Outdoor rooms lessen need to build costlier enclosed spaces
 • Apply LEED standards on materials and methods

COST
Conceptual Cost Estimate

| Site Work | Budget |
|---|---------------|
| Grading Misty site (store, garage, tramway) | 5 million |
| Driveway / steps & path | 3 |
| Utilities undergrounding | 9 |
| Tramway rail / mechanical / tram car | 1.0 |
| Water cisterns / ponds / irrigation | 5 |
| Solar energy system | 1.0 |
| Contour farming / barn / greenhouse | 5 |
| | \$4.7 million |

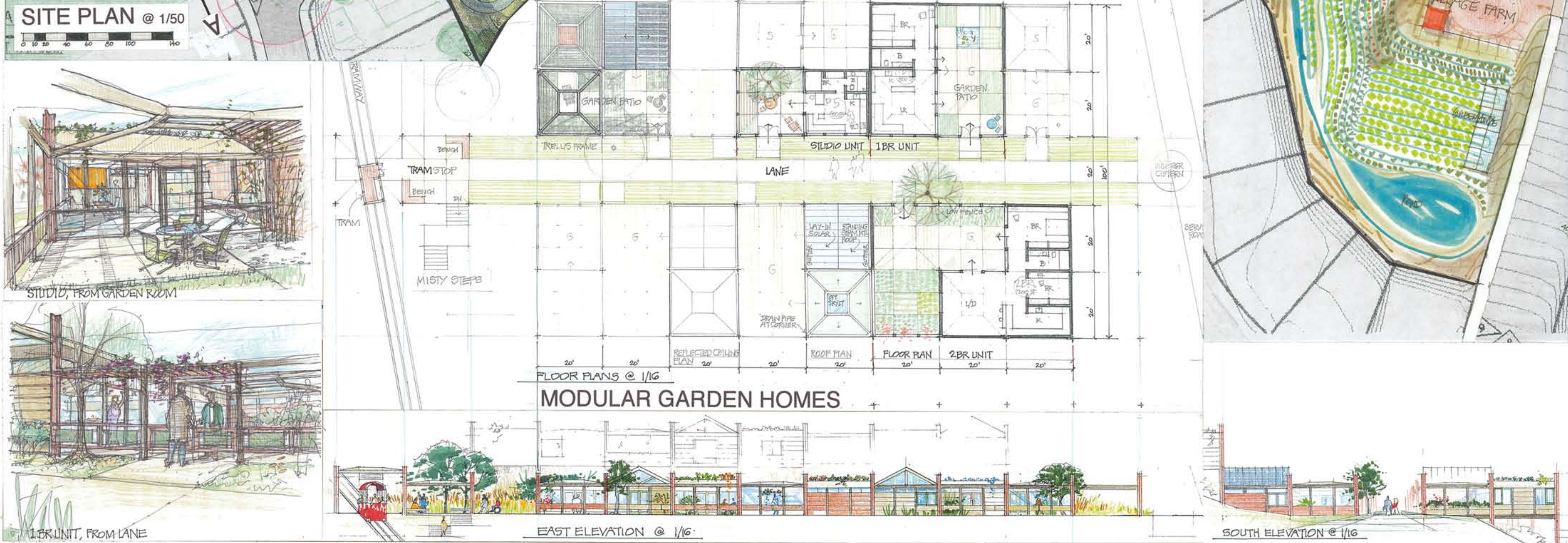
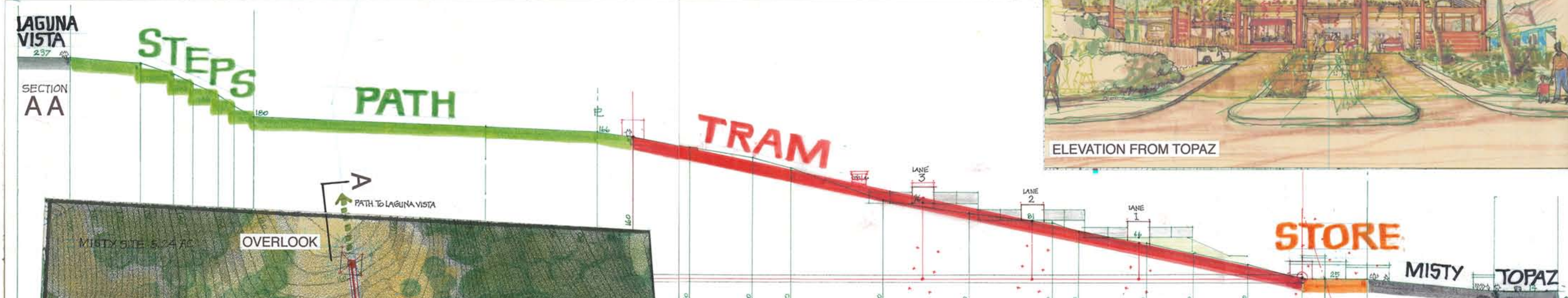
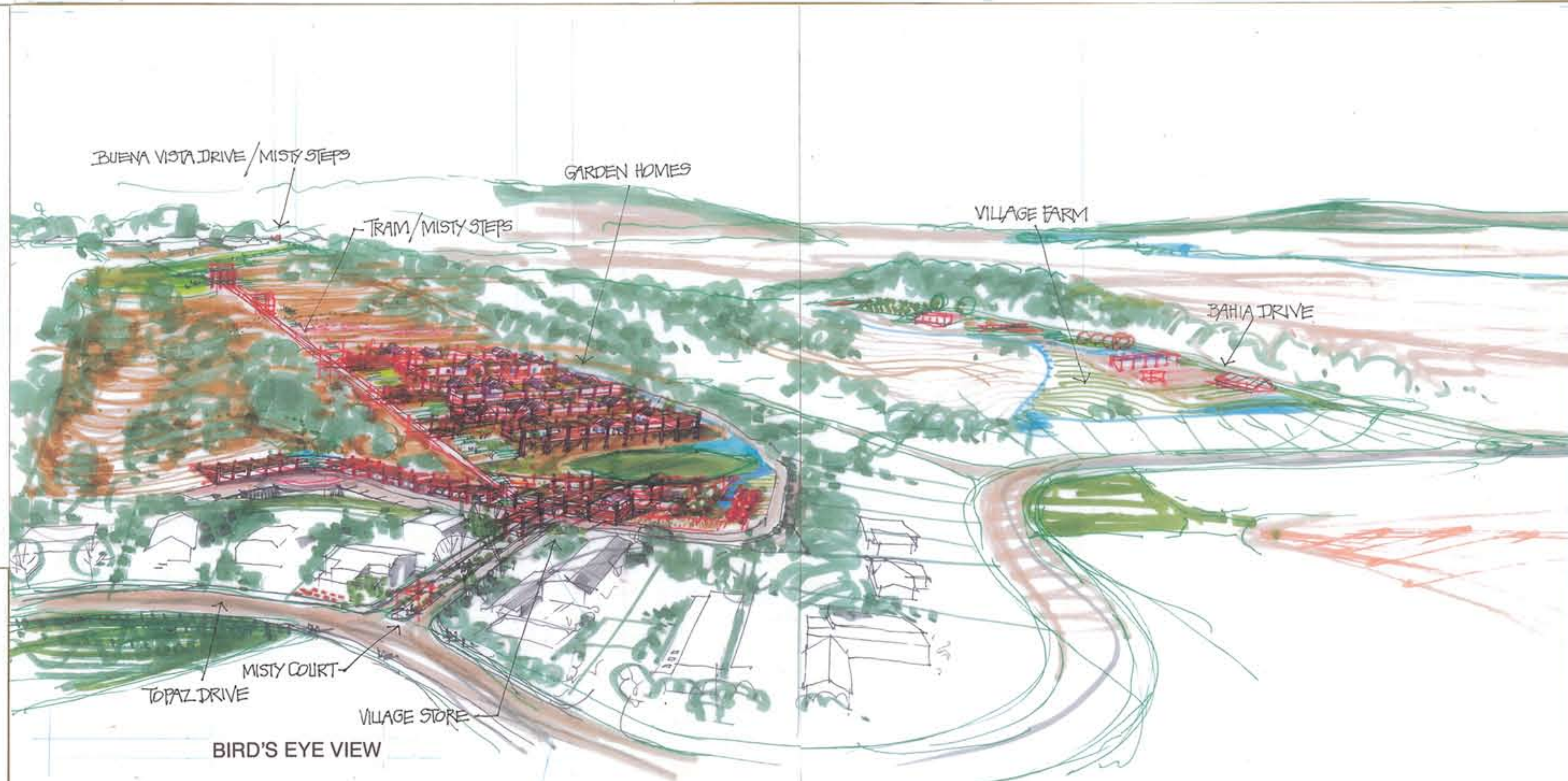
Building Construction

| | |
|--|-------------------------------|
| Set column grids | |
| Shop build modular components: | |
| warm floors/ structural insulated walls/ green roofs | |
| Crane install modular components | |
| housing 20,000SF @ 50 = | \$1,000,000 |
| village center 4,000SF @ 40 = | 160,000 |
| garage 6,000SF @ 20 = | 120,000 |
| | \$1,280,000 say \$1.3 million |
| Total Project Cost | \$6 million |

Organization
 Once the project is built and the Village Center established, the Co-housing organization can be expanded to the GENERAL COMMUNITY for further village improvements that can be accommodated on these two sites, such as a spa, a playground at the upper tram stop, an essential service, a village voice news, perhaps even an electric excursion boat to downtown Petaluma. Limitless possibilities can enrich a community that feels it's in charge.

Given the hillside stepped sites, given the earth-degrading wastefulness of suburbia and social isolation, this proposal exemplifies natural community planning, in answering the call for senior housing.

Bahia can lead other Marin communities to conserve, by becoming a model of better living.



AN ELEGANT WAY TO BUILD

